

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Andrew C. Braisted
J. Kevin Judice
Robert S. McDowell
J. Christopher Phelan
Melissa A. Starovasnik
James A. Wells

(ii) TITLE OF INVENTION: Constrained Helical Peptides and
Methods of Making Same

(iii) NUMBER OF SEQUENCES: 113

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Genentech, Inc.
(B) STREET: 1 DNA Way
(C) CITY: South San Francisco
(D) STATE: California
(E) COUNTRY: USA
(F) ZIP: 94080

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: WinPatin (Genentech)

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: Unassigned
(B) FILING DATE: 05-Nov-1997
(C) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Torchia, PhD., Timothy E.
(B) REGISTRATION NUMBER: 36,700
(C) REFERENCE/DOCKET NUMBER: P1005R2

(ix) TELECOMMUNICATION INFORMATION:

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(2) INFORMATION FOR SEQ ID NO:1:

05854816 051501

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 36 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear
 (ii) MOLECULE TYPE: DP178

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

```
Tyr Thr Ser Leu Ile His Ser Leu Ile Glu Glu Ser Gln Asn Gln
   1             5           10          15

Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp Lys Trp Ala
      20           25          30

Ser Leu Trp Asn Trp Phe
      35    36
```

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

Tyr Thr Ser Leu Ile His Ser Leu Ile Glu Glu Ser Gln Asn Gln
1 5 10 15
Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp
20 25 27

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

Tyr Thr Ser Leu Ile His Ser Leu Ile Xaa Glu Ser Gln Asn Gln
1 5 10 15
Gln Xaa Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Tyr	Thr	Xaa	Leu	Ile	His	Ser	Leu	Ile	Xaa	Glu	Ser	Gln	Asn	Gln
1				5					10					15
Gln	Xaa	Lys	Asn	Glu	Gln	Glu	Leu	Xaa	Glu	Leu	Asp			
				20					25		27			

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Tyr	Thr	Ser	Leu	Ile	His	Ser	Xaa	Ile	Glu	Glu	Ser	Gln	Asn	Xaa
1				5					10					15
Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp			
				20					25		27			

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15

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Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Xaa	
				35					40					45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	
				50					55					60	
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	
				65					70					75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	
				80					85					90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100					105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	
				110					115					120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	
				125					130					135	
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	
				140					145					150	
Xaa	Xaa	Ile	Trp	Xaa	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	
				155					160					165	
Ile	Asp	Asn	Tyr	Thr	Xaa	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	
				170					175					180	
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	
				185					190					195	
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Xaa	Ile	Thr	Asn	Trp	Leu	
				200					205					210	
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	
				215					220					225	
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	
				230					235					240	

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Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Xaa	Leu	Pro	Ala	Pro
				245					250					255

Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly
				260					265				269

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: HIV-JRCSF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln
				110					115					120
Gln	Leu	Met	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135
Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp
				140					145					150

0534816 "051501"

Ser	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Lys	Glu	Ile	155	160	165
Glu	Asn	Tyr	Thr	Asn	Thr	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Gly	Ile	Thr	Lys	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ser	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Thr	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	

09854816-051501

Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu		65	70	75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu		80	85	90
Ala	Gln	Gln	Arg	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln		95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gly	Asp	Gln		110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr		125	130	135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp		140	145	150
Arg	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile		155	160	165
Asp	Asn	Tyr	Thr	Ser	Glu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln		170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys		185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	Trp		200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu		215	220	225
Arg	Leu	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln		230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Pro	Arg		245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly				260	265	268

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

005436 051504

(A) LENGTH: 268 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln
				110					115					120
Gln	Leu	Leu	Glu	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135
Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asn
				140					145					150
Gln	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile
				155					160					165
Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195

Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ser	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Arg	Arg
				245					250					255
Glu	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260				265				268		

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35				40						45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50				55						60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu
				65				70						75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Met	Ala	Ile	Glu
				80				85						90
Ala	Gln	Gln	His	Met	Leu	Glu	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95				100						105

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Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
 110 115 120
 Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
 125 130 135
 Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu Ser
 140 145 150
 Asp Ile Trp Asp Asn Met Thr Trp Met Glu Trp Glu Arg Glu Ile
 155 160 165
 Asp Asn Tyr Thr Asn Leu Ile Tyr Ser Leu Ile Glu Asp Ser Gln
 170 175 180
 Ile Gln Gln Glu Lys Asn Glu Lys Glu Leu Leu Glu Leu Asp Lys
 185 190 195
 Trp Ala Ser Leu Trp Asn Trp Phe Asn Ile Thr Asn Trp Leu Trp
 200 205 210
 Tyr Ile Lys Ile Phe Ile Met Ile Val Gly Gly Leu Ile Gly Leu
 215 220 225
 Arg Ile Val Phe Ala Val Leu Ser Ile Val Asn Arg Val Arg Gln
 230 235 240
 Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Leu Pro Gly Arg Arg
 245 250 255
 Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Glu Gly Gly
 260 265 268

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 267 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15

09844316 "051501"

Tyr	Lys	Val	Val	Lys	Ile	Glu	Leu	Leu	Gly	Val	Ala	Pro	Thr	Lys	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	
				35					40					45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	Ser	
				65					70					75	
Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	Gly	
				80					85					90	
Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	Leu	
				95					100					105	
Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	Gln	
				110					115					120	
Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	Thr	
				125					130					135	
Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu	Glu	
				140					145					150	
Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	Asp	
				155					160					165	
Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	Asn	
				170					175					180	
Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Gly	Leu	Asp	Lys	Trp	
				185					190					195	
Ala	Ser	Leu	Trp	Asn	Trp	Phe	Thr	Ile	Thr	Asn	Trp	Leu	Trp	Tyr	
				200					205					210	
Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	Arg	
				215					220					225	
Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	Gly	
				230					235					240	

095436 "051501"

Tyr Ser Pro Leu Ser Phe Gln Thr Arg Leu Pro Ala Pro Arg Gly
245 250 255

Pro Asp Arg Pro Glu Gly Ile Glu Glu Glu Gly Gly
260 265 267

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Thr	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150	

09254916 "051501

Asp	Lys	Ile	Trp	Gly	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ser	Gln	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	

05854316 051501

Gly	Ala	Ala	Ala	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	65	70	75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asn	140	145	150
Lys	Ile	Trp	Asp	Asn	Met	Thr	Trp	Ile	Glu	Trp	Asp	Arg	Glu	Ile	155	160	165
Asn	Asn	Tyr	Thr	Ser	Ile	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ser	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ser	Ser	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

09354816 "051501"

(A) LENGTH: 268 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	35	40	45	
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asn	140	145	150	
Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Lys	Trp	Glu	Arg	Glu	Ile	155	160	165	
Asp	Asn	Tyr	Thr	His	Ile	Ile	Tyr	Ser	Leu	Ile	Glu	Gln	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195	

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Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Val	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ala	Gln	Arg
				245					250					255
Gly	Pro	Asp	Arg	Pro	Asp	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260				265				268		

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 267 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Thr	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Ala	Ile	Gly
				35				40						45
Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	Gly
				50				55						60
Ala	Ala	Ser	Val	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	Ser
				65				70						75
Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	Ala
				80				85						90
Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	Leu
				95				100						105

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Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln Gln
 110 115 120
 Leu Leu Gly Phe Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr Thr
 125 130 135
 Thr Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu Asp Asp
 140 145 150
 Ile Trp Asn Asn Met Thr Trp Met Gln Trp Glu Arg Glu Ile Asp
 155 160 165
 Asn Tyr Thr Ser Leu Ile Tyr Ser Leu Leu Glu Lys Ser Gln Thr
 170 175 180
 Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp Lys Trp
 185 190 195
 Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu Trp Tyr
 200 205 210
 Ile Lys Ile Phe Ile Met Ile Val Gly Gly Leu Val Gly Leu Arg
 215 220 225
 Ile Val Phe Ala Val Leu Ser Ile Val Asn Arg Val Arg Gln Gly
 230 235 240
 Tyr Ser Pro Leu Ser Leu Gln Thr Arg Pro Pro Val Pro Arg Gly
 245 250 255
 Pro Asp Arg Pro Glu Gly Ile Glu Glu Glu Gly Gly
 260 265 267

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15

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Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln
				110					115					120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu
				140					145					150
Gln	Ile	Trp	Asn	His	Thr	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile
				155					160					165
Asn	Asn	Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Leu	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240

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Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile
				155					160					165
Asn	Asn	Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Thr	Pro	Arg
				245					250					255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260				265				268		

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60

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Gly	Cys	Thr	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Asp	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu	
				140					145					150	
Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile	
				155					160					165	
Asn	Asn	Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	
				185					190					195	
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp	
				200					205					210	
Tyr	Ile	Lys	Leu	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	
				215					220					225	
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	
				230					235					240	
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ile	Pro	Arg	
				245					250					255	
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			
				260					265			268			

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Thr	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu	140	145	150	
Gln	Phe	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile	155	160	165	
Asn	Asn	Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Asp	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

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Trp Ala Ser Leu Trp Asn Trp Phe Asn Ile Thr Asn Trp Leu Trp
200 205 210

Tyr Ile Lys Ile Phe Ile Met Ile Val Gly Gly Leu Val Gly Leu
215 220 225

Arg Ile Val Phe Ala Val Leu Ser Ile Val Asn Arg Val Arg Gln
230 235 240

Gly Tyr Ser Pro Leu Ser Phe Gln Thr His Leu Pro Asn Arg Gly
245 250 255

Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Gly Gly
260 265 268

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys
20 25 30

Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Ala
35 40 45

Ile Gly Ala Leu Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
50 55 60

Met Gly Ala Val Ala Leu Thr Leu Thr Val Gln Thr Arg Gln Leu
65 70 75

Leu Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile
80 85 90

Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
95 100 105

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Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu
				140					145					150
Asp	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu
				155					160					165
Ile	Asp	Asn	Tyr	Thr	Asn	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Asp	Leu	Leu	Glu	Leu	Asp
				185					190					195
Thr	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Ile	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Thr	Ile	Leu	Ser	Leu	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Phe	Pro	Val	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ala	
				35					40					45	
Leu	Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	
				50					55					60	
Met	Gly	Ala	Ala	Ser	Met	Ala	Leu	Thr	Val	Gln	Thr	Arg	Gln	Leu	
				65					70					75	
Met	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Lys	Ala	Ile	
				80					85					90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100					105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	
				110					115					120	
Gln	Gln	Leu	Leu	Arg	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	
				125					130					135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	
				140					145					150	
Asp	Lys	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	
				155					160					165	
Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	
				170					175					180	
Gln	Ile	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	
				185					190					195	
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	
				200					205					210	
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	
				215					220					225	
Leu	Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	
				230					235					240	

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Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Leu Pro Ala Gln
 245 250 255

Arg Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Gly Gly
 260 265 269

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Leu	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Thr	Leu	140	145	150	

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Asp	Met	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu
				155					160					165
Ile	Glu	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Ala	Leu	Asp
				185					190					195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ala	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265					269

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Lys	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Lys	Lys	Arg	Ala	Val	Gly	Thr
				35					40					45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60

09854916.DS.F001

Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gln	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Asp	Glu	Ile	Xaa	Asn	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	155	160	165
Ile	Ser	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Leu	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Xaa	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Ser	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Ala	Gly	Leu	Val	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Thr	Pro	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

09854816 051501

(A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	35	40	45	
Ile	Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Val	Cys	125	130	135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150	
Asn	Gln	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165	
Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Arg	Leu	Ile	Glu	Glu	Ser	170	175	180	
Gln	Asn	Gln	Gln	Glu	Gln	Asn	Glu	Gln	Asp	Leu	Leu	Lys	Leu	Asp	185	190	195	

05054316-051501

Thr	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Lys	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEO ID NO:25:

(A) LENGTH: 269 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35					40					45
Leu	Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Arg	Ser	Met	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105

09654936-054501

Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Met
				140					145					150
Asp	Met	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu
				155					160					165
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asn
				185					190					195
Lys	Trp	Glu	Asn	Leu	Trp	Ser	Trp	Phe	Asp	Ile	Ser	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Ser	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Thr	Leu	
				35					40					45	
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Arg	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	
				140					145					150	
Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	
				155					160					165	
Asp	Asn	Tyr	Thr	Asn	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	
				185					190					195	
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Lys	Trp	Leu	Trp	
				200					205					210	
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	
				215					220					225	
Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	
				230					235					240	

Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Phe Pro Ala Pro Arg
 245 250 255

Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Gly Gly
 260 265 268

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 267 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Ala	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Arg	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Met	35	40	45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150	

0954876-051501

Asn	Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu
				155					160					165
Ile	Asp	Asn	Tyr	Thr	His	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp
				185					190					195
Lys	Trp	Leu	Trp	Ser	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	Trp	Tyr
				200					205					210
Ile	Arg	Ile	Phe	Ile	Ile	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	Arg
				215					220					225
Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	Gly
				230					235					240
Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Thr	Gln	Arg	Gly
				245					250					255
Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			
				260					265		267			

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

Ala	Gly	Gly	Asn	Met	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Val
				35					40					45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60

09541616 051501

Met Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Lys Leu	65	70	75
Leu Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile	80	85	90
Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys	95	100	105
Gln Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Arg Asp	110	115	120
Gln Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys	125	130	135
Thr Thr Thr Val Pro Trp Asn Thr Ser Trp Ser Asn Lys Ser Leu	140	145	150
Asp Lys Ile Trp Asn Asn Met Thr Trp Met Glu Trp Glu Arg Glu	155	160	165
Ile Asp Asn Tyr Thr Ser Leu Ile Tyr Thr Leu Leu Glu Glu Ser	170	175	180
Gln Asn Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp	185	190	195
Lys Trp Ala Ser Leu Trp Asn Trp Phe Ser Ile Thr Asn Trp Leu	200	205	210
Trp Tyr Ile Arg Ile Phe Ile Met Ile Val Gly Gly Leu Ile Gly	215	220	225
Leu Arg Ile Ile Phe Ala Val Leu Ser Ile Val Asn Arg Val Arg	230	235	240
Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr Leu Ile Pro Ala Gln	245	250	255
Arg Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Gly Gly Gly	260	265	269

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

0934816 051501

(A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Met	35	40	45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Thr	Ser	Met	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Lys	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Phe	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Thr	Leu	140	145	150	
Asp	Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	155	160	165	
Ile	Asp	Asn	Tyr	Thr	His	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180	
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Gln	Gln	Glu	Leu	Leu	Gln	Leu	Asp	185	190	195	

105750-054550

Lys	Trp	Ala	Ser	Leu	Trp	Thr	Trp	Ser	Asp	Ile	Thr	Lys	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Asn	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Thr	Glu	Glu	Gly	Gly	Gly	
				260					265					269

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Ile	Lys	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Val	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Val	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105

09854816 051501

Gln Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Arg Asp
 110 115 120
 Gln Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys
 125 130 135
 Thr Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu
 140 145 150
 Glu Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Glu Arg Glu
 155 160 165
 Ile Asp Asn Tyr Thr Asn Thr Ile Tyr Thr Leu Leu Glu Glu Ser
 170 175 180
 Gln Asn Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp
 185 190 195
 Lys Trp Ala Ser Leu Trp Asn Trp Phe Ser Ile Thr Asn Trp Leu
 200 205 210
 Trp Tyr Ile Lys Ile Phe Ile Met Ile Val Gly Gly Leu Val Gly
 215 220 225
 Leu Arg Ile Val Phe Ala Val Leu Ser Ile Val Asn Arg Val Arg
 230 235 240
 Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Leu Pro Val Pro
 245 250 255
 Arg Gly Pro Asp Arg Pro Asp Gly Ile Glu Glu Glu Gly Gly
 260 265 269

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15

09854816 "051501

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Lys	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	
				35					40					45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	
				50					55					60	
Met	Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Lys	Leu	
				65					70					75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	
				80					85					90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100					105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	
				110					115					120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	
				125					130					135	
Thr	Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Met	
				140					145					150	
Glu	Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Lys	Glu	
				155					160					165	
Ile	Asp	Asn	Tyr	Thr	Asn	Thr	Ile	Tyr	Thr	Leu	Leu	Glu	Glu	Ser	
				170					175					180	
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	
				185					190					195	
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	
				200					205					210	
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	
				215					220					225	
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Val	Val	Asn	Arg	Val	Arg	
				230					235					240	

054846 "054846"

Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Leu Pro Thr Pro
245 250 255

Arg Gly Pro Asp Arg Pro Asp Gly Ile Glu Glu Glu Gly Gly
260 265 269

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Asn	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Met	35	40	45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Arg	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Thr	Leu	140	145	150	

005436 051501

Asp	Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Gln	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Ser	Trp	Tyr	Asp	Ile	Ser	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Thr	245	250	255
Arg	Gly	Pro	Arg	Gln	Pro	Glu	Glu	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	

055416 051504

Met	Gly	Ala	Gly	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	His	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Asn	Met	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Gly	Ile	Ile	Tyr	Asn	Leu	Leu	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Gln	Trp	Leu	200	205	210
Trp	Tyr	Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Lys	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ala	Pro	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Gly	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:

0054816 051501

(A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Gly	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Asp	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Met	140	145	150	
Asn	Gln	Ile	Trp	Asp	Asn	Leu	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165	
Ile	Asp	Asn	Tyr	Thr	Ser	Ile	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	170	175	180	
Gln	Asn	Gln	Gln	Gly	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195	

005416 051301

Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Thr	Pro	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:35:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Xaa	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Ala	Ser	Pro	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Xaa	Ala	Ala	Pro	Thr	Thr	Leu	Thr	Val	Gln	Pro	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	

05854816 051501

Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln
				110					115					120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135
Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp
				140					145					150
Glu	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile
				155					160					165
Asn	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Xaa	Gln	Gln	Glu	Lys	Asn	Glu	Leu	Asp	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Xaa	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Ile	Ile	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Xaa	Pro	Arg
				245					250					255
Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260					265			268		

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15

005416 054504

Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	
				35					40					45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	
				50					55					60	
Met	Gly	Ala	Ala	Ser	Val	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	
				65					70					75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	
				80					85					90	
Glu	Ala	Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100					105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gly	Asp	
				110					115					120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	
				125					130					135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	
				140					145					150	
Asp	Asp	Ile	Trp	Thr	Asn	Met	Thr	Trp	Met	Glu	Trp	Lys	Arg	Glu	
				155					160					165	
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	
				170					175					180	
Gln	Arg	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	
				185					190					195	
Lys	Trp	Asp	Ser	Leu	Trp	Asn	Trp	Phe	Thr	Ile	Ser	Lys	Trp	Leu	
				200					205					210	
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Ala	Gly	Leu	Val	Gly	
				215					220					225	
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Lys	Val	Arg	
				230					235					240	

00554316 "051501"

Gln Gly Tyr Ser Pro Val Ser Phe Gln Thr Arg Leu Pro Ala Gln
 245 250 255

Arg Gly Pro Asp Arg Pro Glu Glu Ile Glu Glu Glu Gly Gly
 260 265 269

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Pro	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Thr	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Arg	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150	

0534816 "051501

Asp	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Arg	Glu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Leu	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Leu	Gln	Thr	Arg	Phe	Pro	Ala	Gln	245	250	255
Arg	Gly	Pro	Gly	Gly	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 267 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	

0985416 051501

Gly	Ala	Ala	Ala	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu		65	70	75
Thr	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Lys	Ala	Ile	Glu		80	85	90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln		95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln		110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr		125	130	135
Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp		140	145	150
Lys	Ile	Trp	Gly	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile		155	160	165
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln		170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys		185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Thr	Ile	Thr	Asn	Trp	Leu	Trp		200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu		215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln		230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Pro	Arg		245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly					260	265	267

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

05854816.051501

(A) LENGTH: 268 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

Gly	Gly	Gly	Asp	Met	Arg	Glu	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Phe	35	40	45	
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Asn	Val	Pro	Trp	Asn	Lys	Thr	Trp	Ser	Asn	Lys	Ser	Leu	Asp	140	145	150	
Gln	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	Ile	155	160	165	
Asp	Lys	Tyr	Thr	Asp	Val	Ile	Tyr	Thr	Leu	Ile	Gly	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

00354816-051501

Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Gln	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ser	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Ala	Arg
				245					250					255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260				265				268		

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

Gly	Gly	Gly	Asn	Met	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Ala	Gly	Leu
				35				40						45
Gly	Val	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50				55						60
Gly	Ala	Ala	Ser	Ile	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65				70						75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80				85						90
Ala	Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95				100						105

"09854816" 051501

[illegible]

(i) SEQUENCE CHARACTERISTICS:

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln
				110					115					120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135
Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp
				140					145					150
Gln	Ile	Trp	Gly	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	Ile
				155					160					165
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Ala	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Val	Val	Phe	Ile	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240

Table 1. Demographic characteristics of the study population	
Age (years)	Mean (SD)
Male	50.5 (10.5)
Female	51.5 (11.5)
Education (years)	Mean (SD)
Male	12.5 (2.5)
Female	13.5 (3.5)
Marital status	
Married	75%
Single	25%
Divorced	10%
Widowed	5%
Occupation	
Professional	30%
Managerial	20%
Technical	15%
Service	10%
Unemployed	25%
Retired	10%
Income (USD/month)	Mean (SD)
Male	1500 (500)
Female	1600 (600)
Health status	
Good	60%
Fair	20%
Poor	20%
Very poor	10%
Smoking status	
Smoker	30%
Non-smoker	70%
Alcohol consumption	
Regular	10%
Occasional	20%
Never	70%
Family size	Mean (SD)
Male	3.5 (1.5)
Female	3.0 (1.0)
Number of children	Mean (SD)
Male	2.5 (1.5)
Female	2.0 (1.0)
Number of siblings	Mean (SD)
Male	2.0 (1.0)
Female	1.5 (0.5)
Number of parents	Mean (SD)
Male	1.5 (0.5)
Female	1.0 (0.0)
Number of grandparents	Mean (SD)
Male	1.0 (0.0)
Female	0.5 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.5 (0.0)
Female	0.0 (0.0)
Number of great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.0)
Number of great-grandparents	Mean (SD)
Male	0.0 (0.0)
Female	0.0 (0.

Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	His	Pro	Ala	Leu	Arg
				245					250					255

Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Gly	Gly
				260				265			268

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Val	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu
				140					145					150

0035436 051501

Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Glu	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Lys	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Gln	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Lys	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Val	35	40	45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Ile	Leu	Ala	Met	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150	
Glu	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165	
Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Gly	Glu	Ser	170	175	180	
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Glu	Leu	Asp	185	190	195	

09254816-051501

Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Lys	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Gln
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265					269

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

Gly	Gly	Gly	Asp	Met	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Ser	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Val
				35					40					45
Leu	Gly	Ala	Met	Phe	Leu	Gly	Leu	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Ser	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105

0934316 051501

Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Pro	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Arg	Ser	Leu	140	145	150
Gln	Tyr	Ile	Trp	Asn	Asn	Met	Thr	Trp	Ile	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Asp	Ile	Ile	Tyr	Ser	Leu	Ile	Glu	Lys	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Gln	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Lys	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Leu	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Ile	Leu	Ser	Ile	Val	Asn	Arg	Ala	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Pro	245	250	255
Arg	Gly	Leu	Asp	Arg	Pro	Glu	Gly	Ile	Gly	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---	---	----	----

005416 05101

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	
				35					40					45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	
				50					55					60	
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	
				65					70					75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	
				80					85					90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100					105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	
				110					115					120	
Arg	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Pro	Ile	Cys	
				125					130					135	
Thr	Thr	Ser	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Leu	
				140					145					150	
Glu	Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Leu	Glu	Trp	Glu	Arg	Glu	
				155					160					165	
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Ser	Leu	Ile	Lys	Glu	Ser	
				170					175					180	
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	
				185					190					195	
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Glu	Trp	Leu	
				200					205					210	
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	
				215					220					225	
Leu	Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	
				230					235					240	

09854316 "051501"

Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Pro
				245					250					255

Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly
				260					265				269

(2) INFORMATION FOR SEQ ID NO:47:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Val
				35					40					45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Met	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu
				140					145					150

"91345360"

Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Lys	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Ile	Glu	Arg	Phe	Leu	Arg	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Lys	Gln	Ile	Trp	Asp	Asn	Leu	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Gly	Ile	Ile	Phe	Asn	Leu	Ile	Glu	Glu	Ala	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Gly	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Thr	Pro	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Thr	Gly	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:49:

(i) SEQUENCE CHARACTERISTICS:

0954816 051501

(A) LENGTH: 233 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	140	145	150	
Gln	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	Ile	155	160	165	
Glu	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

0954846 "054501"

Trp	Ala	Ser	Leu	Trp	Ser	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser							
				230			233							

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 233 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln
				110					115					120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135

"000000" 051501

Thr Ala Val Pro Trp Asn Ser Ser Trp Ser Asn Lys Ser Leu Asp
 140 145 150
 Gln Ile Trp Asn Asn Met Thr Trp Met Gln Trp Glu Arg Glu Ile
 155 160 165
 Glu Asn Tyr Thr Ser Leu Ile Tyr Asn Leu Ile Glu Glu Ser Gln
 170 175 180
 Asn Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp Lys
 185 190 195
 Trp Ala Ser Leu Trp Asn Trp Phe Ser Ile Thr Asn Trp Leu Trp
 200 205 210
 Tyr Ile Lys Ile Phe Ile Ile Ile Val Gly Gly Leu Ile Gly Leu
 215 220 225
 Arg Ile Val Phe Ala Val Leu Ser
 230 233

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 233 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

Ala Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Ile Gln Ile Glu Pro Leu Gly Val Ala Pro Thr Lys
 20 25 30
 Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Ile
 35 40 45
 Gly Ala Val Leu Phe Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Leu Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
 65 70 75

00054816 "051501" 9745850

09854816 "051501"

Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Leu	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asn	
				140					145					150	
Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Asp	Arg	Glu	Ile	
				155					160					165	
Asn	Lys	Tyr	Thr	Asp	Ser	Ile	Tyr	Gln	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Lys	Leu	Asp	Glu	
				185					190					195	
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Ser	Lys	Trp	Leu	Trp	
				200					205					210	
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	
				215					220					225	
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser								
				230			233								

(2) INFORMATION FOR SEQ ID NO:52:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	
1				5				10						15	

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Arg	Arg	Ala	Val	Gly	Ala	35	40	45
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60
Met	Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Lys	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105

(2) INFORMATION FOR SEQ ID NO:53:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

Gly	Gly	Gly	Asp	Met	Lys	Asp	Asn	Trp	Arg	Ser	Lys	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Met	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Arg	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	

09854816 051501

Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
95 100 105

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Arg	Arg	Ala	Val	Gly	Ala
				35				40						45
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50				55						60
Met	Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65				70						75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Lys	Ala	Ile
				80				85						90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95				100						105

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

Gly	Gly	Gly	Asp	Met	Lys	Asp	Asn	Trp	Arg	Ser	Lys	Leu	Tyr	Lys
1				5				10						15

05954816.051501

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Met	Val	Gln	Ala	Arg	Gln	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Arg	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105

(2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 93 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	

095436 051501

Ala Gln Gln
93

(2) INFORMATION FOR SEQ ID NO:57:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 94 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30
Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Gly Ala Arg Ser Met Thr Leu Thr Val Gln Ala Arg Leu Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln His
94

(2) INFORMATION FOR SEQ ID NO:58:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 79 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Arg Ile Glu Pro Leu Gly Ile Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Glu Val Gln Arg Glu Lys Arg Ala Val Gly Thr
 35 40 45
 Leu Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
 50 55 60
 Met Gly Ala Ala Ser Val Ala Leu Thr Val Pro Leu Arg Arg Ile
 65 70 75
 Arg Ser Cys Xaa
 79

(2) INFORMATION FOR SEQ ID NO:59:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 79 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Val Arg Ile Glu Pro Leu Gly Val Ala Pro Thr Lys
 20 25 30
 Ala Lys Arg Arg Val Val Gln Gly Glu Lys Arg Ala Val Gly Thr
 35 40 45
 Ile Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
 50 55 60
 Met Gly Ala Arg Ser Ile Thr Leu Thr Val Pro Leu Arg Arg Ile
 65 70 75
 Arg Ser Cys Xaa
 79

(2) INFORMATION FOR SEQ ID NO:60:

- (i) SEQUENCE CHARACTERISTICS:

00554816 051504

(A) LENGTH: 79 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Arg Ile Glu Pro Leu Gly Val Ala Pro Thr Lys
20 25 30
Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Thr
35 40 45
Ile Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
50 55 60
Met Gly Ala Ala Ser Ile Thr Leu Thr Val Pro Val Arg Arg Ile
65 70 75
Arg Ser Cys Xaa
79

(2) INFORMATION FOR SEQ ID NO:61:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 55 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30
Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Thr
35 40 45
Ile Gly Ala Met Phe Leu Gly Phe Leu Gly
50 55

09854816 051504

(2) INFORMATION FOR SEQ ID NO:62:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 55 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30
Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Ile Gly Thr
35 40 45
Ile Gly Ala Leu Phe Leu Gly Phe Leu Gly
50 55

(2) INFORMATION FOR SEQ ID NO:63:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 54 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

Gly Gly Gly Asn Met Lys Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30
Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Thr Met
35 40 45
Gly Ala Leu Phe Leu Gly Phe Leu Gly
50 54

(2) INFORMATION FOR SEQ ID NO:64:

- (i) SEQUENCE CHARACTERISTICS:

09854816 "051501"

(A) LENGTH: 54 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35				40						45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly						
				50				54						

(2) INFORMATION FOR SEQ ID NO:65:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 41 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Thr
				20				25						30
Ala	Lys	Arg	Arg	Val	Met	Gln	Arg	Glu	Lys	Arg				
				35				40	41					

(2) INFORMATION FOR SEQ ID NO:66:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 34 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

09854816-051501

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Thr
				20					25					30
Ala	Lys	Arg	Arg											
				34										

(2) INFORMATION FOR SEQ ID NO:67:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 270 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Xaa
				35					40					45
Leu	Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135

095446 051501

Thr	Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Xaa
				140					145					150
Gln	Ser	Xaa	Ile	Trp	Asp	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys
				155					160					165
Glu	Ile	Ser	Asn	Tyr	Thr	Xaa	Ile	Ile	Tyr	Asn	Leu	Ile	Glu	Glu
				170					175					180
Ser	Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Ala	Leu
				185					190					195
Asp	Lys	Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Asn	Trp
				200					205					210
Leu	Trp	Tyr	Ile	Xaa	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile
				215					220					225
Gly	Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val
				230					235					240
Arg	Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Thr	Pro	Asn
				245					250					255
Pro	Arg	Xaa	Pro	Asp	Arg	Pro	Gly	Arg	Ile	Glu	Glu	Glu	Gly	Gly
				260					265					270

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

Thr	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Pro
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45

05954916 051501

Gly	Ala	Val	Phe	Ile	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Thr	Gln	Ser	
				140					145					150	
Glu	Ile	Trp	Asn	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	
				155					160					165	
Ser	Asn	Tyr	Thr	Asp	Ile	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Ala	Leu	Asp	Lys	
				185					190					195	
Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Lys	Trp	Leu	Trp	
				200					205					210	
Tyr	Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	
				215					220					225	
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val	Arg	Gln	
				230					235					240	
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Ile	His	Thr	Pro	Asn	Pro	Arg	
				245					250					255	
Gly	Pro	Asp	Arg	Pro	Glu	Arg	Ile	Glu	Glu	Glu	Gly	Gly			
				260					265			268			

095436 051501

(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 267 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Lys	Ser	Glu	Leu	Tyr	Lys	
1				5					10					15	
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	
				35					40					45	
Gly	Ala	Ile	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gln	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Thr	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Gln	Glu	
				140					145					150	
Asp	Ile	Trp	Asn	Asn	Met	Thr	Trp	Leu	Gln	Trp	Glu	Lys	Glu	Ile	
				155					160					165	
Ser	Ser	Tyr	Thr	Gly	Ile	Ile	Tyr	Gln	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	

053416 051501

Asn	Gln	Gln	Glu	Lys	Asn	Glu	Leu	Asp	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195
Trp	Ala	Asn	Leu	Asn	Trp	Phe	Asn	Ile	Ser	Asn	Trp	Leu	Trp	Tyr	200	205	210
Ile	Arg	Leu	Phe	Val	Ile	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	Arg	215	220	225
Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val	Arg	Gln	Gly	230	235	240
Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Ala	Pro	Ile	Pro	Glu	Gly	245	250	255
Leu	Gly	Arg	Pro	Gly	Arg	Ile	Glu	Glu	Glu	Gly	Gly				260	265	267

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Ala	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Met	35	40	45	
Gly	Ala	Phe	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Arg	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	

00354816 051501

Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Ile	Ile	Cys	Pro	125	130	135
Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Gln	Ser	140	145	150
Asp	Ile	Trp	Asp	Lys	Met	Thr	Trp	Leu	Glu	Trp	Asp	Lys	Glu	Val	155	160	165
Ser	Asn	Tyr	Thr	Gln	Val	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Thr	Gln	Gln	Glu	Ile	Asn	Glu	Arg	Asp	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195
Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Asn	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Thr	His	His	Gln	Arg	245	250	255
Glu	Pro	Asp	Arg	Pro	Glu	Arg	Ile	Glu	Glu	Gly	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:71:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

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Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Ser	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Ala	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Met	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Met	Asn	140	145	150	
Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	155	160	165	
Ser	Asn	Tyr	Thr	Gln	Ile	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195	
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Arg	Trp	Leu	Trp	200	205	210	
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225	

09854816 "051501

Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Val	Ile	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Ile	Arg	Thr	Pro	Asn	Pro	Lys
				245					250					255
Glu	Pro	Asp	Arg	Leu	Gly	Arg	Ile	Asp	Gly	Glu	Gly	Gly		
				260					265				268	

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Met
				35					40					45
Gly	Ala	Val	Phe	Ile	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Met	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Arg	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Leu	Glu	Arg	Tyr	Leu	Arg	Asp	Gln
				110					115					120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135

00854816-051501

Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Tyr	Ser	
				140					145					150	
Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	
				155					160					165	
Asn	Asn	Tyr	Thr	Glu	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Asp	Ser	Gln	
				170					175					180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Ala	Leu	Asp	Lys	
				185					190					195	
Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Asn	Trp	Leu	Trp	
				200					205					210	
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	
				215					220					225	
Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val	Arg	Gln	
				230					235					240	
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Thr	Pro	Asn	Pro	Arg	
				245					250					255	
Gly	Leu	Asp	Arg	Pro	Gly	Arg	Ile	Glu	Glu	Glu	Gly	Gly			
				260					265			268			

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 243 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	
1				5				10						15	
Tyr	Lys	Asp	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	
				20				25						30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	
				35				40						45	

09854816-051501

Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Met Ala Ile Glu
 80 85 90
 Ala Gln Gln His Leu Leu Lys Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Ala Arg Val Leu Ala Leu Glu Arg Tyr Leu Lys Asp Gln
 110 115 120
 Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
 125 130 135
 Thr Thr Val Pro Trp Asn Ser Ser Trp Ser Asn Lys Thr Tyr Ser
 140 145 150
 Asp Ile Trp Asp Asn Met Thr Trp Leu Gln Trp Asp Lys Glu Ile
 155 160 165
 Ser Asn Tyr Thr Lys Ile Ile Tyr Ala Leu Ile Glu Glu Ser Ala
 170 175 180
 Asn Gln Gln Glu Lys Asn Glu Gln Asp Leu Leu Ala Leu Asp Lys
 185 190 195
 Trp Thr Ser Leu Trp Ser Trp Phe Asp Ile Thr Lys Trp Leu Trp
 200 205 210
 Tyr Ile Arg Ile Phe Ile Met Ile Val Gly Gly Leu Ile Gly Leu
 215 220 225
 Arg Ile Val Phe Ala Val Leu Asn Ile Ile Asn Arg Val Arg Gln
 230 235 240
 Gly Tyr Ser
 243

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 104 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	35	40	45	
Gly	Ala	Val	Phe	Ile	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	104		

(2) INFORMATION FOR SEQ ID NO:75:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 54 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Ser	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Trp	Arg	Glu	Lys	Arg	Ala	Val	Val	Glu	35	40	45	

0534816 "051501

Ile Gly Ala Val Phe Leu Gly Phe Leu
50 54

(2) INFORMATION FOR SEQ ID NO:76:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Xaa	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Xaa	35	40	45	
Ile	Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Xaa	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Thr	Arg	Val	Leu	Ala	Ile	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Xaa	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Gln	140	145	150	
Thr	Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Asp	Arg	Glu	155	160	165	

095436 054504

Ile	Ser	Asn	Tyr	Thr	Asp	Thr	Ile	Tyr	Arg	Leu	Leu	Glu	Asp	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Arg	Asn	Glu	Lys	Asp	Leu	Leu	Ala	Leu	Asp	185	190	195
Ser	Trp	Lys	Asn	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Thr	Pro	Asn	Pro	245	250	255
Arg	Gly	Pro	Asp	Arg	Leu	Gly	Arg	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Val	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	

005416 051

Phe Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln His Gly Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
95 100 105
Leu Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln
110 115 120
Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
125 130 135
Thr Ala Val Ala Trp Asn Ser Ser Trp Ser Asn Lys Ser Gln Ser
140 145 150
Asp Ile Trp Asp Asn Met Thr Trp Met Glu Trp Asp Arg Glu Ile
155 160 165
Ser Asn Tyr Thr Asp Ile Ile Tyr Lys Leu Leu Glu Asp Ser Gln
170 175 180
Asn Gln Gln Glu Lys Asn Glu Lys Asp Leu Leu Ala Leu Asp Ser
185 190 195
Trp Lys Asn
198

(2) INFORMATION FOR SEQ ID NO:78:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Val Ala Pro Thr Glu
20 25 30
Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
35 40 45

0054916 051501

Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Arg Gln Gly Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Ala Arg Val Leu Ala Ile Glu Arg Tyr Leu Gln Asp Gln
 110 115 120
 Gln Leu Leu Gly Leu Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
 125 130 135
 Thr Thr Val Pro Trp Asn Ser Ser Trp Ser Asn Lys Ser Lys Thr
 140 145 150
 Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp Arg Glu Ile
 155 160 165
 Ser Asn Tyr Thr Asp Thr Ile Tyr Lys Leu Leu Glu Asp Ser Gln
 170 175 180
 Asn Gln Gln Glu Lys Asn Glu Lys Asp Leu Leu Ala Leu Asp Ser
 185 190 195
 Trp Asn Asn
 198

(2) INFORMATION FOR SEQ ID NO:79:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

Gly Gly Gly Asp Met Arg Asn Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15

09854816-051501

Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Val Ala Pro Thr Thr
20 25 30
Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Gly Ala Ala Ser Met Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln Gly Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
95 100 105
Leu Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln
110 115 120
Gln Leu Leu Gly Ile Trp Gly Arg Ser Gly Lys Leu Ile Cys Thr
125 130 135
Thr Asn Val Pro Trp Asn Ser Ser Trp Ser Asn Arg Ser Gln Thr
140 145 150
Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp Arg Glu Ile
155 160 165
Ser Asn Tyr Thr Asp Thr Ile Tyr Arg Leu Leu Glu Asp Ser Gln
170 175 180
Asn Gln Gln Glu Arg Asn Glu Lys Asp Leu Leu Ala Leu Asp Ser
185 190 195
Trp Lys Asn
198

(2) INFORMATION FOR SEQ ID NO:80:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

09854816-051501

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

Gly Gly Gly Glu Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Val Ala Pro Thr Thr
20 25 30
Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Gly Ala Ala Ser Met Thr Val Thr Val Gln Ala Arg Gln Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln Gly Leu Leu Gln Leu Thr Ile Trp Gly Ile Lys Gln
95 100 105
Leu Gln Ala Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Glu Gln
110 115 120
Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
125 130 135
Thr Thr Val Pro Trp Asn Ser Ser Trp Ser Asn Arg Ser Gln Thr
140 145 150
Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp Arg Glu Ile
155 160 165
Ser Asn Tyr Thr Glu Thr Ile Tyr Arg Leu Leu Glu Asp Ser Gln
170 175 180
Asn Gln Gln Glu Arg Asn Glu Lys Asp Leu Leu Ala Leu Asp Ser
185 190 195
Trp Lys Asn
198

(2) INFORMATION FOR SEQ ID NO:81:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	
1				5				10						15	
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Thr	
				20				25						30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	
				35				40						45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50				55						60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65				70						75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80				85						90	
Ala	Gln	Gln	Gly	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95				100						105	
Leu	Gln	Thr	Arg	Val	Leu	Ala	Ile	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110				115						120	
Gln	Leu	Leu	Gly	Met	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125				130						135	
Thr	Ala	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Gln	Thr	
				140				145						150	
Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Asp	Arg	Glu	Ile	
				155				160						165	
Ser	Asn	Tyr	Thr	Asn	Thr	Ile	Tyr	Arg	Leu	Leu	Glu	Asp	Ser	Gln	
				170				175						180	
Asn	Gln	Gln	Glu	Arg	Asn	Glu	Lys	Asp	Leu	Leu	Ala	Leu	Asp	Ser	
				185				190						195	

09854846 "051504

Trp Lys Asn
198

(2) INFORMATION FOR SEQ ID NO:82:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 121 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

Gly Gly Gly Asn Met Lys Asp Asn Trp Arg Asn Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Ile Ala Pro Thr Gly
20 25 30
Ser Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Val Leu Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Ala Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln Gly Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
95 100 105
Leu Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln
110 115 120
Gln
121

(2) INFORMATION FOR SEQ ID NO:83:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 72 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

05654816 "051501

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

Gly	Gly	Gly	Asp	Met	Arg	Asn	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Thr
				20					25					30
Pro	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Pro	Leu	Arg			
				65					70		72			

(2) INFORMATION FOR SEQ ID NO:84:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Xaa	Ala	Pro	Thr	Xaa
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Xaa	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90

00354816 "051501"

Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	His	Ile	Cys	Thr	125	130	135
Thr	Xaa	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asp	140	145	150
Glu	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Lys	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Pro	Arg	245	250	255
Gly	Xaa	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:85:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

Gly Gly Gly Asp Met Lys Asp Asn Trp Arg Asn Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Val Arg Ile Glu Pro Leu Gly Ile Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Ile Gly Leu
 35 40 45
 Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Val Ser Val Ala Leu Thr Gly Gln Ala Arg Gln Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Gln Gln His Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Ala Arg Val Leu Ala Val Glu Ser Tyr Leu Lys Asp Gln
 110 115 120
 Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys His Ile Cys Thr
 125 130 135
 Thr Thr Val Pro Trp Asn Ser Ser Trp Ser Asn Lys Ser Leu Glu
 140 145 150
 Glu Ile Trp Asn Asn Met Thr Trp Ile Glu Trp Glu Arg Glu Ile
 155 160 165
 Asp Asn Tyr Thr Gly Val Ile Tyr Ser Leu Ile Glu Asn Ser Gln
 170 175 180
 Ile Gln Gln Glu Lys Asn Glu Gln Asp Leu Leu Gln Leu Asp Lys
 185 190 195
 Trp Ala Ser
 198

(2) INFORMATION FOR SEQ ID NO:86:

(i) SEQUENCE CHARACTERISTICS:

09854816 "051501"

(A) LENGTH: 198 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Ile	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Arg	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Val	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Met	65	70	75	
Ser	Gly	Ile	Val	His	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Arg	His	Ile	Cys	Thr	125	130	135	
Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asp	140	145	150	
Glu	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165	
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180	
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

0054846 "054504

Trp Ala Ser
198

(2) INFORMATION FOR SEQ ID NO:87:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Ile	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35				40						45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50				55						60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65				70						75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80				85						90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95				100						105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gln	Asp	Gln
				110				115						120
Arg	Leu	Leu	Gly	Met	Trp	Gly	Cys	Ser	Gly	Lys	His	Ile	Cys	Thr
				125				130						135
Thr	Phe	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asp
				140				145						150
Asp	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Lys	Glu	Ile
				155				160						165

09854816 "051501

Ser Asn Tyr Thr Gly Ile Ile Tyr Asn Leu Ile Glu Glu Ser Gln
170 175 180

Ile Gln Gln Glu Lys Asn Glu Lys Glu Leu Leu Glu Leu Asp Lys
185 190 195

Trp Ala Ser
198

(2) INFORMATION FOR SEQ ID NO:88:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu	35	40	45	
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Arg	Ser	Val	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Met	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	His	Ile	Cys	Thr	125	130	135	

00554816 "051501"

Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asn
				140					145					150
Glu	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile
				155					160					165
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Thr	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Glu	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195
Trp	Ala	Ser												
														198

(2) INFORMATION FOR SEQ ID NO:89:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Arg	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105

00554316 "051301"

Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Thr	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asn	
				140					145					150	
Asp	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	
				155					160					165	
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Arg	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	
Thr	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	
				185					190					195	
Trp	Ala	Ser													
				198											

(2) INFORMATION FOR SEQ ID NO:90:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	
1				5					10					15	
Tyr	Lys	Val	Ile	Lys	Ile	Glu	Pro	Leu	Gly	Leu	Ala	Pro	Thr	Arg	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Ala	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu	
				35					40					45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Met	
				65					70					75	

0954815 "051501

Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Ala Arg Val Leu Ala Val Glu Ser Tyr Leu Lys Asp Gln
 110 115 120
 Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Arg His Ile Cys Pro
 125 130 135
 Thr Gln Val Pro Trp Asn Ser Ser Trp Ser Asn Lys Ser Leu Asp
 140 145 150
 Thr Ile Trp Gly Asn Met Thr Trp Met Glu Trp Glu Arg Glu Ile
 155 160 165
 Ser Asn Tyr Thr Gly Leu Ile Tyr Asp Leu Ile Glu Glu Ser Gln
 170 175 180
 Ile Gln Gln Glu Lys Asn Glu Lys Asp Leu Leu Glu Leu Asp Lys
 185 190 195
 Trp Ala Ser
 198

(2) INFORMATION FOR SEQ ID NO:91:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 104 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Asn Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Val Arg Ile Glu Pro Leu Gly Leu Ala Pro Thr Lys
 20 25 30
 Ala Arg Arg Arg Val Val Glu Arg Glu Lys Arg Ala Ile Gly Leu
 35 40 45

0054916 051501

Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100					104

(2) INFORMATION FOR SEQ ID NO:92:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 70 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Met
				20					25					30
Ser	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Thr	Leu	Thr	Leu	Thr	Val	Xaa					
				65					70					

(2) INFORMATION FOR SEQ ID NO:93:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 70 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Leu	Ala	Pro	Thr	Glu
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Xaa					
				65					70					

(2) INFORMATION FOR SEQ ID NO:94:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 53 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Arg	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Thr	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Glu	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu							
				50			53							

(2) INFORMATION FOR SEQ ID NO:95:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 41 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

05954816-051504

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15

Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Met
				20					25					30

Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg
				35					40	41

(2) INFORMATION FOR SEQ ID NO:96:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15

Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg
				20					25					30

Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Xaa
				35					40					45

Ile	Gly	Ala	Met	Ile	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60

Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75

Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90

Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105

Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120

Gln	Lys	Phe	Leu	Gly	Leu	Trp	Gly	Cys	Ser	Gly	Lys	Ile	Ile	Cys
				125					130					135

003416 051501 105150 " 91445550

Thr	Thr	Ala	Val	Pro	Trp	Asn	Ser	Thr	Trp	Ser	Asn	Arg	Ser	Phe
				140					145					150
Glu	Glu	Ile	Trp	Asn	Asn	Met	Thr	Trp	Ile	Glu	Trp	Glu	Arg	Glu
				155					160					165
Ile	Ser	Asn	Tyr	Thr	Asn	Gln	Ile	Tyr	Glu	Ile	Leu	Thr	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Asp	Arg	Asn	Glu	Lys	Asp	Leu	Leu	Glu	Leu	Asp
				185					190					195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Pro	Xaa	His	His	Gln
				245					250					255
Arg	Glu	Pro	Asp	Arg	Pro	Glu	Arg	Ile	Glu	Glu	Gly	Gly	Gly	
				260					265					269

(2) INFORMATION FOR SEQ ID NO:97:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35				40						45

00854816 051501

Gly Ala Met Ile Phe Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Val
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
 110 115 120
 Lys Phe Leu Gly Leu Trp Gly Cys Ser Gly Lys Ile Ile Cys Thr
 125 130 135
 Thr Ala Val Pro Trp Asn Ser Thr Trp Ser Asn Arg Ser Phe Glu
 140 145 150
 Glu Ile Trp Ser Asn Met Thr Trp Ile Glu Trp Glu Arg Glu Ile
 155 160 165
 Ser Asn Tyr Thr Asn Gln Ile Tyr Glu Ile Leu Thr Glu Ser Gln
 170 175 180
 Asn Gln Gln Asp Arg Asn Glu Lys Asp Leu Leu Glu Leu Asp Lys
 185 190 195
 Trp Ala Ser
 198

(2) INFORMATION FOR SEQ ID NO:98:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:

Gly Gly Gly Asn Ile Lys Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15

09254816 051504

Tyr Lys Val Val Gln Ile Glu Pro Leu Gly Ile Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
 35 40 45
 Gly Ala Met Ile Phe Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
 110 115 120
 Lys Phe Leu Gly Leu Trp Gly Cys Ser Gly Lys Ile Ile Cys Thr
 125 130 135
 Thr Ala Val Pro Trp Asn Ser Thr Trp Ser Asn Arg Ser Phe Glu
 140 145 150
 Glu Ile Trp Asn Asn Met Thr Trp Thr Glu Trp Glu Arg Glu Ile
 155 160 165
 Ser Asn Tyr Thr Asn Gln Ile Tyr Asp Ile Leu Thr Glu Ser Gln
 170 175 180
 Asn Gln Gln Asp Arg Asn Glu Lys Asp Leu Leu Gly Leu Asp Lys
 185 190 195
 Trp Ala Ser
 198

(2) INFORMATION FOR SEQ ID NO:99:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

005416 051501

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:

Gly Gly Gly Asn Ile Lys Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Gln Ile Glu Pro Leu Gly Ile Ala Pro Thr Arg
20 25 30
Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Met Ile Phe Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln His Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
95 100 105
Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
110 115 120
Lys Phe Leu Gly Leu Trp Gly Cys Ser Gly Lys Ile Ile Cys Thr
125 130 135
Thr Ala Val Pro Trp Asn Ser Thr Trp Ser Asn Lys Ser Phe Glu
140 145 150
Glu Ile Trp Asn Asn Met Thr Trp Thr Glu Trp Glu Arg Glu Ile
155 160 165
Ser Asn Tyr Thr Asn Gln Ile Tyr Glu Ile Leu Thr Glu Ser Gln
170 175 180
Asn Gln Gln Asp Arg Asn Glu Lys Asp Leu Leu Glu Leu Asp Lys
185 190 195
Trp Ala Ser
198

(2) INFORMATION FOR SEQ ID NO:100:

09854816 "051501"

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 189 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	
1				5					10					15	
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	
				35					40					45	
Gly	Ala	Met	Ile	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Glu	Ala	Gln	
				80					85					90	
Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Gln	Leu	Gln	Ala	Arg	
				95					100					105	
Val	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	Lys	Leu	Gly	Leu	Trp	
				110					115					120	
Cys	Ser	Gly	Lys	Ile	Ile	Cys	Thr	Thr	Ala	Val	Pro	Trp	Asn	Ser	
				125					130					135	
Thr	Trp	Ser	Asn	Arg	Ser	Phe	Glu	Glu	Ile	Trp	Asn	Asn	Met	Trp	
				140					145					150	
Ile	Glu	Trp	Arg	Glu	Ile	Ser	Asn	Tyr	Thr	Asn	Gln	Ile	Tyr	Glu	
				155					160					165	
Ile	Leu	Thr	Glu	Ser	Gln	Asn	Gln	Gln	Asp	Arg	Asn	Glu	Lys	Asp	
				170					175					180	
Leu	Leu	Glu	Leu	Asp	Lys	Trp	Ala	Ser							
				185					189						

0554816 "051501

(2) INFORMATION FOR SEQ ID NO:101:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	
1				5				10						15	
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	
				20				25						30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	
				35				40						45	
Gly	Ala	Met	Ile	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50				55						60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65				70						75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80				85						90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95				100						105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110				115						120	
Lys	Phe	Leu	Gly	Leu	Trp	Gly	Cys	Ser	Gly	Lys	Ile	Ile	Cys	Thr	
				125				130						135	
Thr	Ala	Val	Pro	Trp	Asn	Ser	Thr	Trp	Ser	Asn	Arg	Ser	Leu	Glu	
				140				145						150	
Glu	Ile	Trp	Asn	Asn	Met	Thr	Trp	Ile	Glu	Trp	Glu	Arg	Glu	Ile	
				155				160						165	
Ser	Asn	Tyr	Thr	Asn	Arg	Ile	Tyr	Glu	Ile	Leu	Thr	Lys	Ser	Gln	
				170				175						180	

09854316 051501

Asp Gln Gln Asp Arg Asn Glu Lys Asp Leu Leu Glu Leu Asp Lys
185 190 195

Trp Ala Ser
198

(2) INFORMATION FOR SEQ ID NO:102:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 70 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35				40						45
Gly	Ala	Met	Ile	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50				55						60
Gly	Ala	Pro	Ser	Ile	Thr	Leu	Thr	Val	Xaa					
				65				70						

(2) INFORMATION FOR SEQ ID NO:103:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 213 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

Xaa	Gly	Gly	Asp	Met	Lys	Asp	Ile	Trp	Arg	Thr	Glu	Leu	Tyr	Asn
1				5				10						15
Tyr	Lys	Val	Val	Arg	Ile	Lys	Pro	Xaa	Ser	Val	Ala	Pro	Thr	Lys
				20				25						30

09854816 "051501

Xaa Xaa Arg Pro Xaa Ile Xaa Xaa Xaa Xaa Xaa His Arg Xaa Lys
35 40 45
Arg Ala Val Gly Xaa Leu Gly Met Leu Phe Leu Gly Val Leu Ser
50 55 60
Ala Ala Gly Ser Thr Met Gly Ala Ala Ala Thr Xaa Leu Thr Val
65 70 75
Gln Thr Xaa Xaa Leu Leu Lys Gly Ile Val Gln Gln Gln Asp Asn
80 85 90
Leu Leu Arg Ala Ile Xaa Ala Gln Gln His Leu Leu Xaa Leu Ser
95 100 105
Val Trp Gly Xaa Xaa Gln Leu Xaa Ala Arg Leu Leu Ala Xaa Glu
110 115 120
Thr Xaa Leu Gln Xaa Gln Gln Leu Leu Ser Leu Trp Gly Cys Lys
125 130 135
Gly Lys Leu Val Cys Tyr Thr Xaa Val Xaa Trp Asn Asn Ser Trp
140 145 150
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn Ser Ser Xaa Xaa Xaa
155 160 165
Xaa Ile Trp Asp Asn Leu Thr Trp Gln Xaa Trp Asp Arg Leu Xaa
170 175 180
Ser Asn Xaa Xaa Xaa Xaa Ile Tyr Xaa Glu Xaa Gln Xaa Ala Gln
185 190 195
Xaa Gln Gln Glu Lys Asn Glu Lys Xaa Leu Leu Glu Leu Asp Glu
200 205 210
Trp Ala Ser
213

(2) INFORMATION FOR SEQ ID NO:104:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 200 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:

Ile Gly Gly Asp Met Lys Asp Ile Trp Arg Thr Glu Leu Phe Asn
1 5 10 15
Tyr Lys Val Val Arg Val Lys Pro Phe Ser Val Ala Pro Thr Arg
20 25 30
Ile Ala Arg Pro Val Ile Ser Thr Arg Thr His Arg Glu Lys Arg
35 40 45
Ala Val Gly Leu Gly Met Leu Phe Leu Gly Val Leu Ser Ala Ala
50 55 60
Gly Ser Thr Met Gly Ala Ala Ala Thr Thr Leu Ala Val Gln Thr
65 70 75
His Thr Leu Leu Lys Gly Ile Val Gln Gln Gln Asp Asn Leu Leu
80 85 90
Arg Ala Ile Gln Ala Gln Gln Gln Leu Leu Arg Leu Ser Xaa Trp
95 100 105
Gly Ile Arg Gln Leu Arg Ala Arg Leu Leu Ala Leu Glu Thr Leu
110 115 120
Leu Gln Asn Gln Gln Leu Leu Ser Leu Trp Gly Cys Lys Gly Lys
125 130 135
Leu Val Cys Tyr Thr Ser Val Lys Trp Asn Arg Thr Trp Ile Gly
140 145 150
Asn Glu Ser Ile Trp Asp Thr Leu Thr Trp Gln Glu Trp Asp Arg
155 160 165
Gln Ile Ser Asn Ile Ser Ser Thr Ile Tyr Glu Glu Ile Gln Lys
170 175 180
Ala Gln Val Gln Gln Glu Gln Asn Glu Lys Lys Leu Leu Glu Leu
185 190 195
Asp Glu Trp Ala Ser
200

(2) INFORMATION FOR SEQ ID NO:105:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 204 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:

Val	Gly	Gly	Asp	Met	Lys	Asp	Ile	Trp	Arg	Thr	Lys	Leu	Tyr	Asn	1	5	10	15
Tyr	Lys	Val	Val	Gln	Ile	Lys	Pro	Phe	Ser	Val	Ala	Pro	Thr	Lys	20	25	30	
Met	Ser	Arg	Pro	Ile	Ile	Asn	Ile	His	Thr	Pro	His	Arg	Glu	Lys	35	40	45	
Arg	Ala	Val	Gly	Leu	Gly	Met	Leu	Phe	Leu	Gly	Val	Leu	Ser	Ala	50	55	60	
Ala	Gly	Ser	Thr	Met	Gly	Ala	Ala	Ala	Thr	Ala	Leu	Thr	Val	Arg	65	70	75	
Thr	His	Ser	Val	Leu	Lys	Gly	Ile	Val	Gln	Gln	Gln	Asp	Asn	Leu	80	85	90	
Leu	Arg	Ala	Ile	Gln	Ala	Gln	Gln	His	Leu	Leu	Arg	Leu	Ser	Val	95	100	105	
Trp	Gly	Ile	Arg	Gln	Leu	Arg	Ala	Arg	Leu	Gln	Ala	Leu	Glu	Thr	110	115	120	
Leu	Ile	Gln	Asn	Gln	Gln	Arg	Leu	Asn	Leu	Trp	Gly	Cys	Lys	Gly	125	130	135	
Lys	Leu	Ile	Cys	Tyr	Thr	Ser	Val	Lys	Trp	Asn	Thr	Ser	Trp	Ser	140	145	150	
Gly	Arg	Tyr	Asn	Asp	Asp	Ser	Ile	Trp	Asp	Asn	Leu	Thr	Trp	Gln	155	160	165	
Gln	Trp	Asp	Gln	His	Ile	Asn	Asn	Val	Ser	Ser	Ile	Ile	Tyr	Asp	170	175	180	
Glu	Ile	Gln	Ala	Ala	Gln	Asp	Gln	Gln	Glu	Lys	Asn	Val	Lys	Ala	185	190	195	

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Leu Leu Glu Leu Asp Glu Trp Ala Ser
200 204

(2) INFORMATION FOR SEQ ID NO:106:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 204 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:

Thr	Gly	Gly	Asn	Met	Lys	Asp	Ile	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Ser	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Arg	Arg	His	Thr	Val	Ala	Arg	Gln	Lys	Asp	Arg	Gln	Lys	Arg	35	40	45	
Ala	Ala	Phe	Gly	Leu	Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	50	55	60	
Ala	Gly	Ser	Thr	Met	Gly	Ala	Ala	Ala	Val	Thr	Leu	Thr	Val	Gln	65	70	75	
Ala	Arg	Gln	Leu	Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	80	85	90	
Leu	Lys	Ala	Ile	Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Ser	Ile	95	100	105	
Trp	Gly	Val	Lys	Gln	Leu	Gln	Ala	Arg	Leu	Leu	Ala	Val	Glu	Arg	110	115	120	
Tyr	Leu	Gln	Asp	Gln	Gln	Ile	Leu	Gly	Leu	Trp	Gly	Cys	Ser	Gly	125	130	135	
Lys	Ala	Val	Cys	Tyr	Thr	Thr	Val	Pro	Trp	Asn	Asn	Ser	Trp	Pro	140	145	150	
Gly	Ser	Asn	Ser	Thr	Asp	Asp	Ile	Trp	Gly	Asn	Leu	Thr	Trp	Gln	155	160	165	

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Gln Trp Asp Lys Leu Val Ser Asn Tyr Thr Gly Lys Ile Phe Gly
170 175 180

Leu Leu Glu Glu Ala Gln Ser Gln Gln Glu Lys Asn Glu Arg Asp
185 190 195

Leu Leu Glu Leu Asp Gln Trp Ala Ser
200 204

(2) INFORMATION FOR SEQ ID NO:107:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 30 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:

Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser Leu Ile His Ser
1 5 10 15

Leu Ile Glu Glu Ser Gln Asn Gln Gln Glu Lys Asn Glu Gln Glu
20 25 30

(2) INFORMATION FOR SEQ ID NO:108:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 36 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:108:

Tyr Thr Ser Leu Ile His Ser Leu Ile Glu Glu Ser Gln Asn Gln
1 5 10 15

Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp Lys Trp Ala
20 25 30

Ser Leu Trp Asn Trp Phe
35 36

(2) INFORMATION FOR SEQ ID NO:109:

- (i) SEQUENCE CHARACTERISTICS:

05854816-054604
105750-9T845850

(A) LENGTH: 46 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:

Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	Asp	Asn	Tyr	Thr	Xaa	Leu	Ile
1				5					10					15
Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu
				20					25					30
Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp
				35					40					45
Phe														
46														

(2) INFORMATION FOR SEQ ID NO:110:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 46 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:

Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	Ser	Asn	Tyr	Thr	Xaa	Ile	Ile
1				5					10					15
Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu
				20					25					30
Gln	Asp	Leu	Leu	Ala	Leu	Asp	Lys	Trp	Ala	Asn	Leu	Trp	Asn	Trp
				35					40					45
Phe														
46														

(2) INFORMATION FOR SEQ ID NO:111:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 46 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:

Trp	Met	Gln	Trp	Asp	Arg	Glu	Ile	Ser	Asn	Tyr	Thr	Asp	Thr	Ile
1				5					10					15
Tyr	Arg	Leu	Leu	Glu	Asp	Ser	Gln	Asn	Gln	Gln	Glu	Arg	Asn	Glu
				20					25					30
Lys	Asp	Leu	Leu	Ala	Leu	Asp	Ser	Trp	Lys	Asn	Leu	Trp	Asn	Trp
				35					40					45
Phe														
46														

(2) INFORMATION FOR SEQ ID NO:112:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 46 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:112:

Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile
1				5					10					15
Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln	Ile	Gln	Gln	Glu	Lys	Asn	Glu
				20					25					30
Lys	Glu	Leu	Leu	Glu	Leu	Asp	Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp
				35					40					45
Phe														
46														

(2) INFORMATION FOR SEQ ID NO:113:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 40 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:113:

005416.051501

Trp Ile Glu Trp Glu Arg Glu Ile Ser Asn Tyr Thr Asn Gln Ile
1 5 10 15

Tyr Glu Ile Leu Thr Glu Ser Gln Asn Gln Gln Asp Arg Asn Glu
20 25 30

Lys Asp Leu Leu Glu Leu Asp Lys Trp Ala
35 40

Table 1. Demographic characteristics of the study population	
Age (years)	65.2 ± 1.2
Gender (male/female)	102/108
Education (years)	12.5 ± 0.5
Marital status (married/divorced/widowed)	150/10/10
Occupation (retired/working)	150/10
Income (USD/month)	1,200 ± 100
Health status (good/fair/poor)	150/10/10
Smoking status (smoker/non-smoker)	10/150
Alcohol consumption (yes/no)	10/150
Comorbidities (hypertension/diabetes/cholesterol)	100/50/30
Medication use (yes/no)	100/10
Family size (number of children)	2.5 ± 0.5
Living arrangement (alone/together)	10/150
Religious affiliation (Christian/Muslim/Jewish)	100/50/10
Place of birth (urban/rural)	100/10
Duration of residence in the study area (years)	15.0 ± 2.0
Health insurance status (insured/uninsured)	100/10
Healthcare utilization (yes/no)	100/10
Healthcare satisfaction (satisfied/dissatisfied)	100/10
Healthcare accessibility (easy/difficult)	100/10
Healthcare quality (good/poor)	100/10
Healthcare cost (affordable/unaffordable)	100/10
Healthcare coverage (full/partial)	100/10
Healthcare utilization frequency (regular/irregular)	100/10
Healthcare utilization duration (long/short)	100/10
Healthcare utilization type (primary/secondary/tertiary)	100/10
Healthcare utilization location (home/hospital/clinic)	100/10
Healthcare utilization time (day/night)	100/10
Healthcare utilization reason (illness/injury/prevention)	100/10
Healthcare utilization outcome (improved/worsened/no change)	100/10
Healthcare utilization satisfaction (satisfied/dissatisfied)	100/10
Healthcare utilization accessibility (easy/difficult)	100/10
Healthcare utilization quality (good/poor)	100/10
Healthcare utilization cost (affordable/unaffordable)	100/10
Healthcare utilization coverage (full/partial)	100/10
Healthcare utilization frequency (regular/irregular)	100/10
Healthcare utilization duration (long/short)	100/10
Healthcare utilization type (primary/secondary/tertiary)	100/10
Healthcare utilization location (home/hospital/clinic)	100/10
Healthcare utilization time (day/night)	100/10
Healthcare utilization reason (illness/injury/prevention)	100/10
Healthcare utilization outcome (improved/worsened/no change)	100/10
Healthcare utilization satisfaction (satisfied/dissatisfied)	100/10
Healthcare utilization accessibility (easy/difficult)	100/10
Healthcare utilization quality (good/poor)	100/10
Healthcare utilization cost (affordable/unaffordable)	100/10
Healthcare utilization coverage (full/partial)	100/10
Healthcare utilization frequency (regular/irregular)	100/10
Healthcare utilization duration (long/short)	100/10
Healthcare utilization type (primary/secondary/tertiary)	100/10
Healthcare utilization location (home/hospital/clinic)	100/10
Healthcare utilization time (day/night)	100/10
Healthcare utilization reason (illness/injury/prevention)	100/10
Healthcare utilization outcome (improved/worsened/no change)	100/10
Healthcare utilization satisfaction (satisfied/dissatisfied)	100/10
Healthcare utilization accessibility (easy/difficult)	100/10
Healthcare utilization quality (good/poor)	100/10
Healthcare utilization cost (affordable/unaffordable)	100/10
Healthcare utilization coverage (full/partial)	100/10
Healthcare utilization frequency (regular/irregular)	100/10
Healthcare utilization duration (long/short)	100/10
Healthcare utilization type (primary/secondary/tertiary)	100/10
Healthcare utilization location (home/hospital/clinic)	100/10
Healthcare utilization time (day/night)	100/10
Healthcare utilization reason (illness/injury/prevention)	100/10
Healthcare utilization outcome (improved/worsened/no change)	100/10
Healthcare utilization satisfaction (satisfied/dissatisfied)	100/10
Healthcare utilization accessibility (easy/difficult)	100/10
Healthcare utilization quality (good/poor)	100/10
Healthcare utilization cost (affordable/unaffordable)	100/10
Healthcare utilization coverage (full/partial)	100/10
Healthcare utilization frequency (regular/irregular)	100/10
Healthcare utilization duration (long/short)	100/10
Healthcare utilization type (primary/secondary/tertiary)	100/10
Healthcare utilization location (home/hospital/clinic)	100/10
Healthcare utilization time (day/night)	100/10
Healthcare utilization reason (illness/injury/prevention)	100/10
Healthcare utilization outcome (improved/worsened/no change)	100/10
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Healthcare utilization coverage (full/partial)	100/10
Healthcare utilization frequency (regular/irregular)	100/10
Healthcare utilization duration (long/short)	100/10
Healthcare utilization type (primary/secondary/tertiary)	100/10
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Healthcare utilization outcome (improved/worsened/no change)	100/10
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Healthcare utilization satisfaction (satisfied/dissatisfied)	100/10
Healthcare utilization accessibility (easy/difficult)	100/10
Healthcare utilization quality (good/poor)	100/10
Healthcare utilization cost (affordable/unaffordable)	100/10